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1 Overview

The Project Control Plan (PCP) is a summary-level, overarching document to the project controls procedures. The PCP defines the plan from which Bechtel National, Inc. (BNI) will manage the scope, cost, and schedule baseline for the Waste Treatment Plant (WTP) project. The PCP performs many functions, one of which is meeting contract requirements for Project Execution Plan, an overview document to ensure all areas of project controls are addressed. The PCP also includes a database integration plan, and will be a training tool for new staff members.

The PCP is organized to follow the natural progression of the baseline, beginning with 1) baseline development, 2) performance measurement, 3) change management, 4) annual baseline updates, 5) funds management, and 6) project reporting. The PCP identifies the systems employed by BNI and the interfaces between those systems. Integration of these systems is required to provide a comprehensive view of project Performance.

The Project Baseline (CE-24590-PCA00001) establishes the project cost, schedule, and scope baseline. All documents and attachments included in or referenced by that document are considered part of the baseline, and form the basis for execution, monitoring, reporting, and change. All project performance will be measured against this baseline, and all changes will be referenced from this baseline.

The Project Control Systems Description (PCSD) is included in the Project Execution Plan (PL-W375-TE0006) being written as required. The PCSD will reference this document (PCP) as a supporting document, to avoid duplication.

The PCP provides guidance to achieve the following objectives:

- Define the standards under which the project cost, schedule, and technical baseline will be maintained in compliance with the contract.
- Provides the system integration required to produce timely, accurate, and user friendly reports to project management.
- Early identification of cost and schedule issues so that management can implement mitigation plans.
- Provide configuration control of scope, schedule, and costs.
- Provide accurate comparisons of actual project performance to the baseline plan.
- Promote concise breakdown of workscope and organization of data.

BNI corporate procedures underpin the PCP. Many of these procedures have not yet been tailored to meet the specific requirements of this project. A schedule of these procedures is included in Attachment 1, for information only.

2 Requirements

The PCP has been prepared as required by BNI to ensure the successful management of the WTP project. The plan also serves as a reference document to the PCSD. The project controls requirements identified in Standard 1 of the prime contract (DE-AC27-01RU14136) are referenced and described in this document.

The PCP has been prepared to be compliant with DOE Order 430.1, Life Cycle Asset Management (LCAM), October 14, 1999.

The PCP is designed to enable DOE to proceed with the critical decision process, and to enable DOE to meet the data requirements of the integrated planning, accountability, and budgeting system (IPABS).

The PCP has been prepared to meet the requirements of the River Protection Project-Project Management Plan, (DOE-ORP-2000-06, Rev.1P) as follows:

- Provides the integration of scope, schedule, and cost at the work breakdown structure (WBS) and organizational breakdown structure (OBS) level.
- Cost and schedule elements define the time frame, interrelationships, and estimated resources required to complete the estimate workscope.
- The baseline submittal provides DOE access, down to the lowest measurable task, in both hard copy and electronic form.
- The WBS has been developed to be consistent with requirements of the WBS.
- The baseline schedule is logic driven, demonstrating all key internal interfaces, and includes all interface control points with the DOE and its contractors.
- The WTP project baseline is under change control once DOE concurrence is received.
- The project control tools identified in the PCP provide all necessary data to manage and control the baseline and meet the requirements of PMP section 6.1, Baseline Performance, and the requirements set forth in Section C, Standard 1 of the contract.

3 Baseline Development

3.1 Summary

This section of the PCP describes the methodology and processes used to develop the WTP project baseline. Supporting documentation for the baseline has been included in the Project Baseline deliverable and is not included in this document.

The baseline development process results in a time-phased budgeted cost of work scheduled (BCWS). The remaining components, budgeted cost of work performed (BCWP) and actual cost of work performed (ACWP), of our earned value management system are described in Section 4 of this document.

The baseline cost is the sum of all WBS elements, including escalation and contingency, but excludes fee and risk-based contingency.

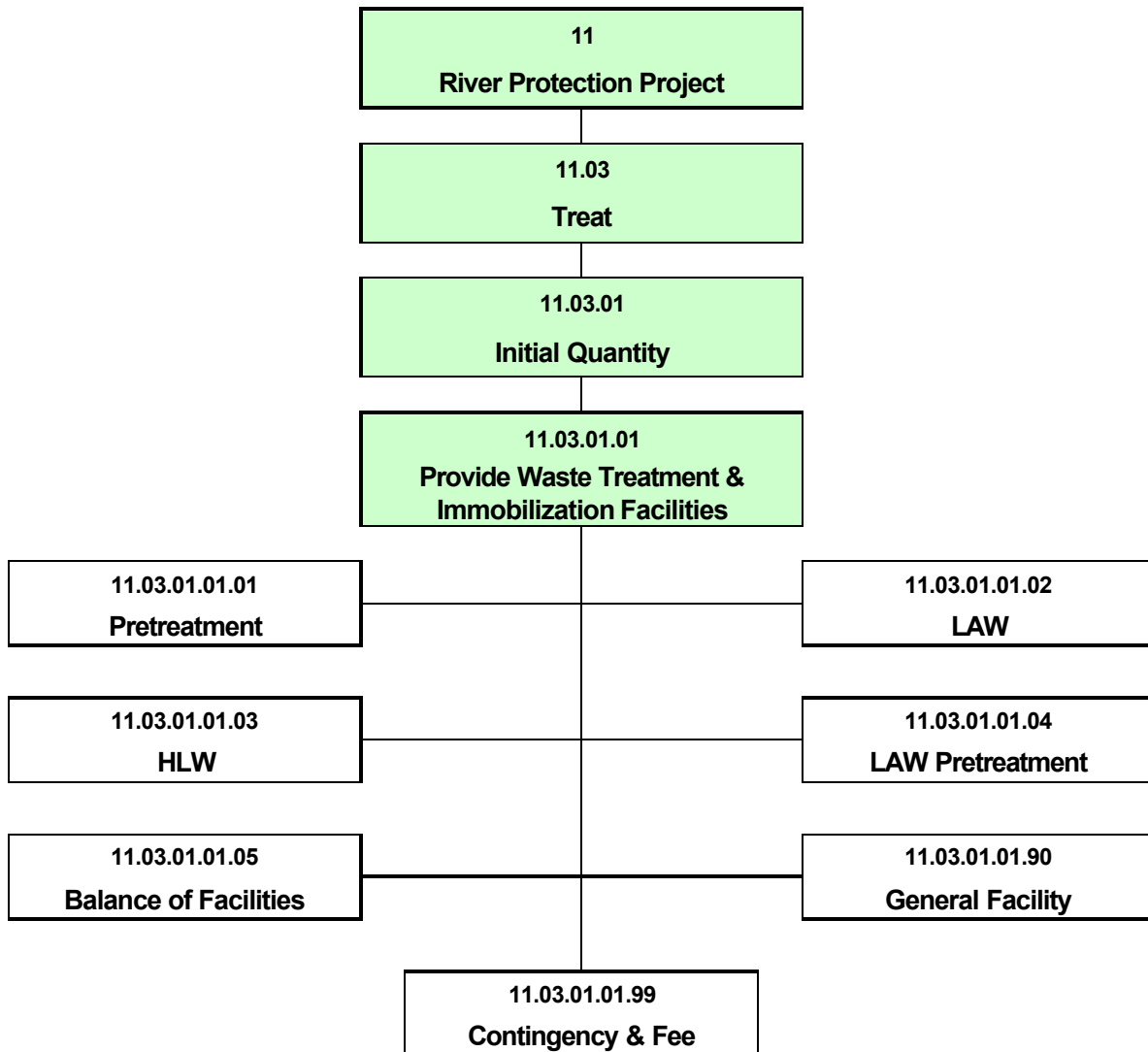
3.2 Technical Baseline

The WBS lists the authorized workscope, and then successively subdivides that workscope into increasingly detailed and manageable subsidiary work components. The WBS provides the mechanism to integrate the workscope, cost estimate, and schedule. Figure 1 shows the summary-level WBS. The WBS through level 7 is shown in Attachment 2. The project controls database administrator maintains the WBS.

The BNFL deliverable of 24 April 2000 formed the foundation for technical scope. The Project Baseline references the above BNFL deliverable and incorporates scope changes as identified in the Due Diligence Summary (RPT-W375-MG00078, Rev.0).

The scope baseline was developed by reconciling the April 2000 technical scope with the current contract scope. The due diligence process also identified changes from the basis for the estimate prepared in April 2000.

Figure 1 Summary Work Breakdown Structure



3.3 Roles and Responsibilities

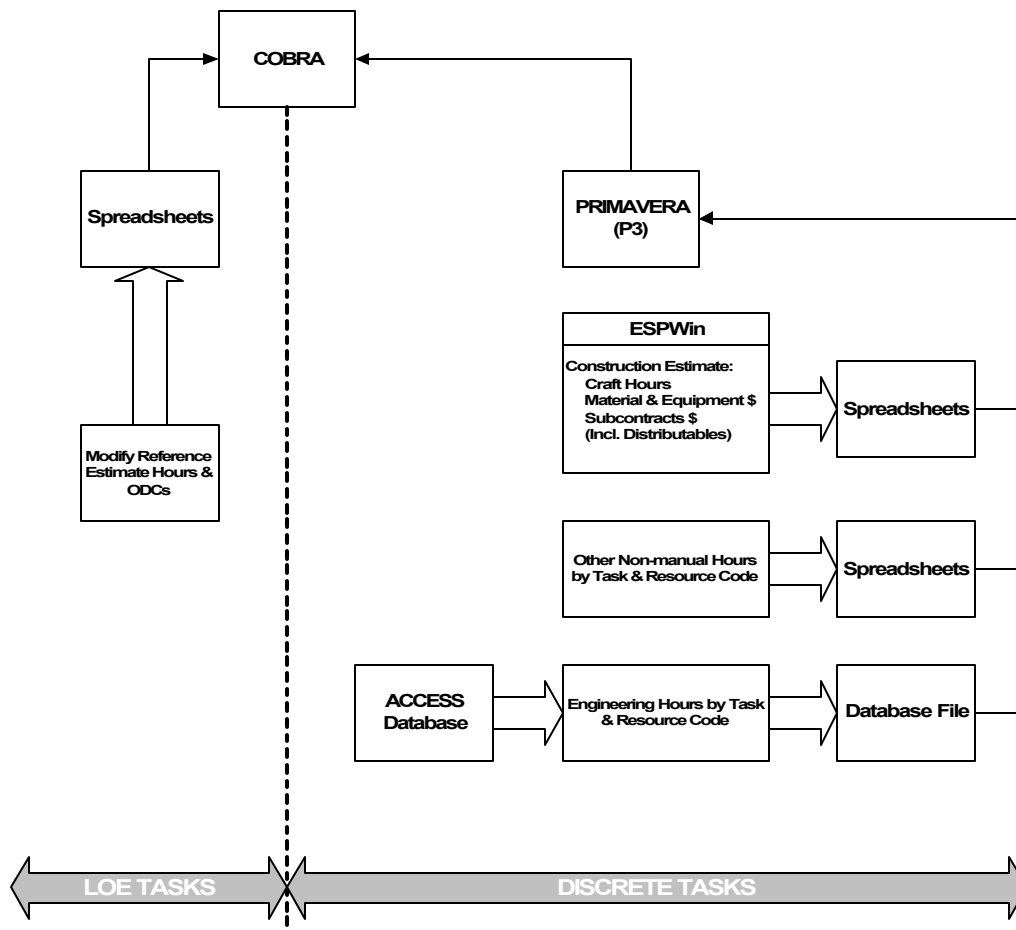
The functional managers and area project managers are responsible for providing input to the project controls department in support of developing the project technical, cost, and schedule baseline. The quality of cost, schedule, and scope definition is the responsibility of the area project and functional Managers. The project controls department is responsible for the collection, organization, and maintenance of data. The WTP project manager approves the project baseline.

3.4 Cost Baseline

The baseline development process is shown in Figure 2. The data is integrated and the baseline is produced using a software tool called COBRA. COBRA has been implemented at INEEL and at Hanford.

Estimates for level-of-effort (LOE) tasks were prepared using spreadsheets. Discrete tasks were estimated and the resource requirements were loaded into PRIMAVERA activities for time-distribution. The resource-loaded activities with appropriate coding structures were electronically integrated into COBRA for application of unit rates, establishing the cost and schedule control baseline, and preparing fiscal year funding scenarios.

Figure 2 Baseline Development



The cost baseline was developed utilizing the following methods:

- Targeted costs were developed for each functional department based on the proposal data.
- LOE and other direct costs (ODC) were a bottoms-up estimate by each functional department.
- Unit rates and quantities were verified for discreet deliverables.
- The April 2000 pricing basis was updated to present day (from January 2000 to January 2001).
 - Craft labor pricing was updated using the most recent site labor agreement.
 - Non-manual labor rates were brought up-to-date for BNI, Washington Group, International (WGI), and staff augmentation personnel.
 - An assessment was made of pricing changes from January 2000 by sampling key vendors and multi-project acquisition (MPA) suppliers.
- Field distributable estimates were reviewed and modified to reflect the current schedule. The previous purchase versus lease assessment made on construction equipment was revisited.
- LOE staffing and ODC estimates were time-phased and loaded into COBRA.
- Capital cost estimates were resource loaded in P3 activities for time-phasing, and then incorporated into COBRA.
- Labor costs were priced in COBRA using current forward pricing rates.
- “Soft costs” such as sales tax, freight, insurance, and taxes were incorporated in COBRA to produce the baseline.

3.5 Description of Estimate Development Methodology

An estimate kickoff meeting was held on January 25, 2001 with RPP-WTP management. The department managers were informed of the requirements and the plan to develop the estimates and schedules for the baseline deliverable. This plan was developed further with detailed working-level instructions during the course of the baseline development.

The estimate methodology was to estimate LOE hours based on staffing plans for management and lead positions, and to estimate discrete tasks with a detailed evaluation based on scoping sheets for each task or activity. These resources by skill category were loaded into P3 schedule activities to develop time phasing of resources. These resource-loaded activities were then loaded into COBRA for pricing and baseline development.

LOE estimates were developed by taking a “bottoms-up” approach in developing the scope of work statements and associated resource requirements, and developing full-time equivalent (FTE) staff counts.

The individual department managers, in conjunction with project and program management, developed their respective staff levels by position, company, and grade level. Scoping statements were used to define the specific roles and responsibilities for each department. Each department position was time-phased. WBS codes and resource codes were assigned to each position. Department managers coordinated their LOE staff input with each other whenever a potential overlap of responsibility occurred, thus avoiding potential staff duplications or omissions.

LOE staffing and labor hours input was obtained from all department managers using electronic spreadsheets. The time-phased FTEs were converted to hours using an average of 154 hours per month. Functional department managers developed company and grade identifiers commensurate with the experience level for the positions. Bare labor rates were developed in accordance with each company's

expected salary band for the project. WTP management reviewed 2001 salary structure tables for both BNI and WGI.

After the initial submission of all staffing levels, department managers and project controls conducted reviews internally, and with program and project management, to evaluate the reasonableness of departmental staffing. Potential duplications or omissions were considered and, if identified, were corrected in the details of the departmental staffing worksheets. The results of this exercise were reviewed with BNI and WGI corporate functional managers in late March.

ODC data was derived by compiling ODC input worksheets from each department manager. Specific types of ODCs were identified, namely business travel, staff augmentation travel, relocation (short-term assignments), information technology (hardware and software), facilities lease, office furniture costs, and all other ODCs.

Input required to estimate relocation (and short-term assignment) consisted of the amount of relocations required and the type of relocation. Department managers provided the number and type of relocations required. The human resources department provided the basis of cost for each type of relocation. Estimates were developed for each type of relocation. Estimators applied the number of trips by type to the rate by relocation type to arrive at the total relocation estimate. The budget for relocation (and short-term assignment) costs reside in the WBS codes for human resources.

The full detail of baseline estimate development is available in the Project Baseline.

3.6 Schedule Baseline

The baseline integrated schedule, level 3 in the schedule control hierarchy, is built around the framework of the WBS and the responsibilities of the organizations assigned to perform the work. The schedule can also be sorted by OBS. The schedule integrates workscope with WBS and encompasses the entire workscope. See Figure 3 for the hierarchy of schedule tools.

Figure 3 Schedule Hierarchy

Schedule Level	Schedule Level Description	Bechtel Control Function	Contract Reporting Functions
LEVEL 1 <div>Major Milestone Schedule</div>	<ul style="list-style-type: none"> APPROX. 30 ACTIVITIES MAJOR CONTRACT MILESTONES & ACTIVITIES 	<ul style="list-style-type: none"> CONTRACT DEFINITION HIGH LEVEL VISIBILITY 	<ul style="list-style-type: none"> HIGH LEVEL VISIBILITY
LEVEL 2 <div>Project Summary Schedule</div>	<ul style="list-style-type: none"> APPROXIMATELY 300 ACTIVITIES MAJOR ACTIVITIES BY FACILITY AND FUNCTION (Design Documents, Commodities, Safety Analysis, etc.) PROJECT EXTERNAL INTERFACE MILESTONES SUMMARIZED FROM THE LEVEL 3 SCHEDULE 	<ul style="list-style-type: none"> HIGH LEVEL VISIBILITY & INTEGRATION 	<ul style="list-style-type: none"> HIGH LEVEL VISIBILITY & INTEGRATION
LEVEL 3 <div>Project Integration Schedule</div>	<ul style="list-style-type: none"> APPROXIMATELY 3,000 - 4,000 ACTIVITIES FULLY LOGICALLY INTEGRATED RESOURCE LOADED PROVIDES PLAN TO WORKING LEVEL SCHEDULE RECEIVES STATUS FROM WORKING LEVEL SCHEDULE 	<ul style="list-style-type: none"> INTEGRATION OF ALL PROJECT ELEMENTS BASIS OF CRITICAL PATH AND ACTIVITY FLOAT ANALYSIS SCHEDULE REPRESENTATION OF WBS SCOPE BASIS OF TIME RELATED COST FLOW BASIS FOR PERFORMANCE REPORTING 	<ul style="list-style-type: none"> SCOPE, SCHEDULE AND COST TIE BCWS, BCWP AND ACWP REPORTING ORP SCHEDULE INTEGRATION
LEVEL 4 <div>Project Detail Schedule</div>	<ul style="list-style-type: none"> APPROXIMATELY 15,000 ACTIVITIES LOGICALLY INTEGRATED AS APPROPRIATE PROVIDES STATUS TO PROJECT INTEGRATED SCHEDULE STATUS FROM SOURCE DOCUMENTS AND PERSONNEL 	<ul style="list-style-type: none"> BASIS FOR WEEKLY PLANNING AND PROGRESS RESOURCE LOADED AS NECESSARY 	
<p>Source Documents (Typical)</p> <div> <div>EPPR & QURR</div> <div>Contractor Schedules</div> <div>Special Schedules</div> </div> <ul style="list-style-type: none"> DETAIL CONTROL OF WORK PRODUCTS 			

The WTP project integrated schedule is a logic-driven CPM network, identifying the project critical path and the float available to activities not on the critical path. The schedule is compliant with the requirements of the River Protection Project-Project Management Plan, and Standard 1 of the prime contract.

The schedule is the primary tool for integration of the significant activities of the various functional groups within the WTP. It also identifies and integrates significant interfaces with external sources including DOE and ORP contractors and regulatory agencies. The relationship of the WTP to the other elements of the River Protection Project (RPP) is captured through the schedule activities for the interface control documents.

The project integrated schedule is the basis for earned value performance reporting on discrete tasks. PRIMAVERA and COBRA work as an integrated tool to produce time-phased personnel hours, direct costs, and overhead costs for defining the BCWS baseline. The project integrated schedule provides the schedule status information for determination of the earned value, BCWP.

The project integration schedule is a central element of the WTP project control system. Activities in the schedule will be expanded in detail and integration logic by the subordinate schedule, the project detail schedule. The further cascading of detail planning and progress information is contained in sub-tier schedules provided by contractors, WTP project performance monitoring tools, and WTP project quantification databases.

Information is drawn from the project integration schedule to report at higher levels of scheduling summarization. The WTP project summary schedule displays significant activities and integration points. Level 4 schedules will be built to identify less critical interfaces, and will serve as working level schedules. The level 4 schedules are not required by all organizations, and are intended to provide more detail when and where necessary.

The project integration schedule was prepared utilizing the following methods:

- The durations of construction activities were based on the construction plan, the quantification of commodities to be installed, the estimate of installation performance, and workforce availability considerations.
- Key procurements were evaluated for fabrication lead-time and the need for engineering input to procurement specification.
- Engineering personnel hours were assessed relative to the work remaining as documented by the turnover from the interim contractor. Engineering production of installation documentation was established relative to the needs of the construction installation.
- The status of engineering completion further defined the timing of key permitting actions and safety document preparation to support the initial placement of structural concrete.
- The commissioning plan and personnel requirements were evaluated against the construction completion schedule to establish the commissioning dates.
- Research and technology (R&T) and waste qualification performance plans were scheduled with respect to their integration with engineering and commissioning.
- The project integration schedule was loaded with personnel hours and costs then interfaced with the COBRA software. Time-related cost, such as management manpower, was assessed relative to the baseline schedule timing of events.

3.7 Integrated Baseline

Cost and schedule integration for the baseline estimate and schedule was accomplished utilizing COBRA project management software.

Resource requirements were imported into the COBRA software through integration with level 3 project integration schedule activities at level 4 of the WBS. In addition, OBS ties to performing organizations were coded against activities to reflect control accounts below level 4 of the WBS.

3.8 Work Authorization

BNI submittal and subsequent DOE concurrence with the WTP Project Baseline, combined with funding limitations provided in the contract, provide work authorization to BNI. Delegation of work authority by the WTP project manager is provided through the OBS. The WTP project manager controls organizational performance through OBS performance reports. The area project managers control facility performance through the WBS. Changes to work authorization are managed through the trend and change control program and contract changes.

4 Performance Measurement

4.1 Summary

This section provides summary level descriptions of how the budgeted cost of work performed (BCWP) is calculated and how the actual cost of work performed (ACWP) is collected. The BCWS as described above in Section 3, Baseline Development, is integrated with the BCWP and the ACWP as described in this section 4, Performance Measurement. The comparison of BCWS, BCWP, and ACWP provide the basis for performance measurement and variance analysis. Attachment 3 provides the flow diagram and interfaces between the BNI systems used to collect, integrate, and summarize project performance.

WBS and OBS managers are delegated authority by the WTP project manager and functional managers, and are responsible for status of work activities and monitoring of work performance.

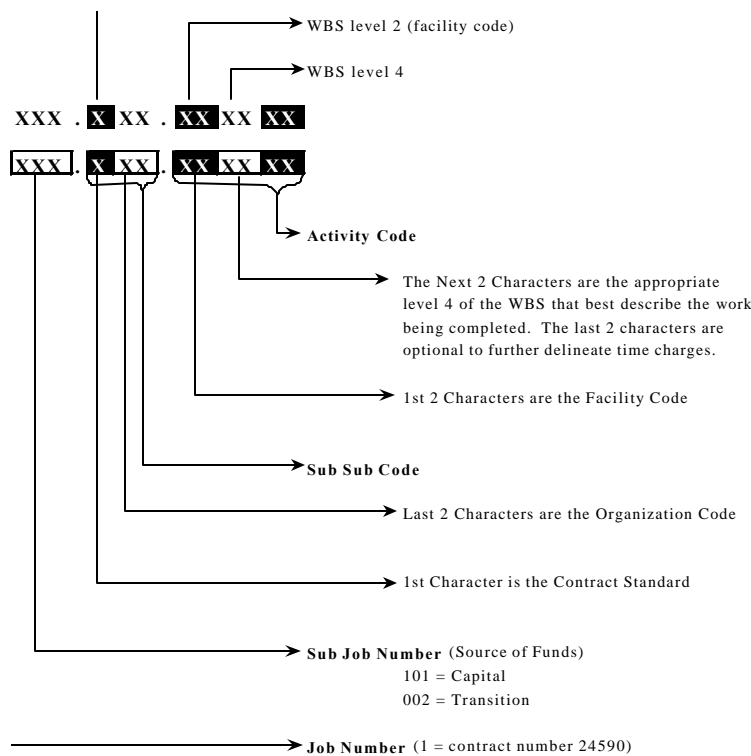
Actual job hours expended to complete workscope are captured through the use of an electronic time record (gBETR) at the cost code level. Figure 4.1 identifies the data collected on time records. All project personnel, including staff augmentation subcontractors, home office personnel, business trip and temporary assignment employees, complete a daily electronic time record. Including staff augmentation personnel in the electronic time recording effort eliminates the need to accrue costs for these subcontracts. Subcontracts are paid monthly based on contractual unit rates and actual hours as collected in gBETR. Other direct costs (ODC) including office material, equipment, travel, and so on, are collected at the charge code level and collected in the controllers reporting system (CRS). The combination of job hour costs and ODCs form the basis for the ACWP.

Schedule performance is measured utilizing the schedule control hierarchy, the level 3 project integration schedule and the level 3 current integrated schedule. The project integration schedule development process is described in Section 3. The activities and logic relationships in the project integration schedule can only be modified through approved baseline changes as described Section 5.

The current integrated schedule, level 3, is generated from the project integration schedule at the time of approval. The current integrated schedule continues as the active project integration vehicle when the project integration baseline schedule is reserved as the baseline document. The current integrated schedule is under the change management process, permitting changes only through approval of a schedule trend. The status of each activity from the current integrated schedule, as a percent complete value, is reported to COBRA for calculation of the earned value, BCWP. BCWP is earned by assessing the status of the current integrated schedule at the data date relative to the progress that would have been earned from the activity on the project integration schedule time basis.

The status of activities reported on the current integrated schedule is derived from information contained on the project detail schedule, level 4, or other verifiable sources of activity progress. Activities are developed on the project detail schedule when necessary for planning and progress monitoring. The status of activities on the project detail schedule are assessed and updated to the more summarized activities on the current integrated schedule. The project detail schedule and the current integrated schedule are not electronically linked, but a formal assurance process maintains activity date control between the schedules. The project detail schedule activities may also be driven from lower-level source information. The engineering progress and performance report (EPPR) allows engineering document status for specific deliverables to be collected and reported to a project detail schedule activity. Status for project detail schedule activities or current integrated schedule activities may also be drawn from other source documents, such as verified contractor schedules or approved vendor progress submittals.

Figure 4 Charge Code Structure

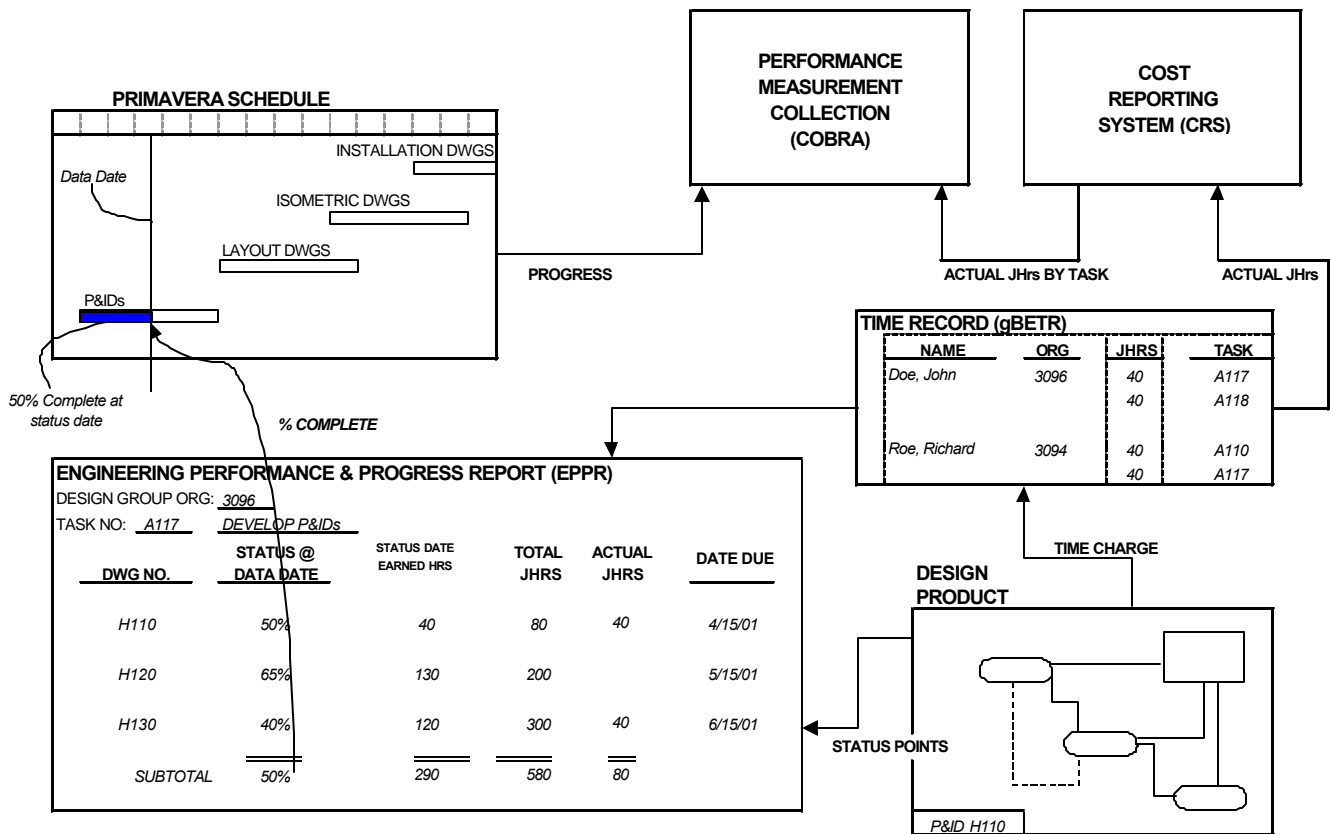


4.2 Discrete Non-Manual Tasks (Excluding Construction Field Non-Manual)

Discrete non-manual (non-craft related) tasks are those tasks which are quantifiable to individual work products. These tasks are typically estimated on a unit rate basis. For example, drawings, calculations, and specifications can be estimated as to the quantity, which will be required, and an average unit job hour rate to complete each product. The product of multiplying quantity and unit rate provides the total estimate for each type drawing, specification or calculation.

The PC Works system EPPR is used to collect these quantifiable products and unit rates. The EPPR summarizes the detail listing of engineering products (such as drawings and calculations) and unit rates for each product, combined with actual job hours collected in gBETR, to provide comparison of actual unit rate performance to the baseline unit rate targets. Groupings of engineering products are coded to specific level 4 schedule activities, and when summarized provide the percent complete for the schedule activity. EPPR is managed on a daily basis and summarized as required to feed schedule percent complete. Figure 5 demonstrates the relationship between EPPR, gBETR, PRIMAVERA, and COBRA.

Figure 5 EPPR Design Flow



Note: For illustrative purposes only - details shown are simplified examples

4.3 Level of Effort for Non-Manuals

Level of effort (LOE) tasks performed by non-manual personnel are those tasks that cannot be quantified to the production of individual or repetitive work products. These tasks are typically estimated and time phased based on the supervisor's professional experience on previous jobs. Examples of LOE tasks include the controllers organization, project management, human resources, project document control, project controls, construction field non-manual, and so forth.

The BCWP for LOE tasks is set equal to the BCWS. Schedule variances will always be zero. However, cost variances exist when actual staffing levels are either above or below the planned staffing level

(BCWS). COBRA performs the function of setting BCWP equal to BCWS and compares ACWP to the BCWP to identify cost variances.

4.4 Craft (Construction)

Calculation of craft performance is very similar to the process used in EPPR described for engineering discrete performance above. Instead of using the EPPR system of PC Works, the construction team will use a quantity and unit rate report (QURR) system from PC Works. The QURR summarizes the quantities of construction commodities installed by commodity type (such as pipe, hangers, valves, and cable) and the actual job hours expended by commodity type to calculate the actual unit rate for installation. The actual unit rate is compared, at the commodity level, to the baseline budgeted unit rate to identify cost variances.

Groupings of commodities are coded to specific level 4 schedule activities, and when summarized provide the percent complete for the scheduled activity. QURR is maintained on a weekly basis and summarized as required to feed schedule percent complete.

4.5 Materials, Equipment, Other Direct Costs (ODCs) and Subcontracts

- Material includes any engineered items, equipment, or bulk field materials, such as pipe, tubing, conduit, wire, and cable. Material and equipment cost includes the purchase price of the material and, where applicable, added shipping charges or vendor support services. Material and equipment budgets will generally be planned in a time-phased block-loaded manner by category, based on need dates to support the construction schedule. Specific work packages are established as detail planning is performed. Earned value within a work package is taken based on the budget for procured items within each work package upon receipt at the jobsite. ACWP will be taken from the controllers reporting system.
- Earned value for construction and engineering subcontracts will be based on physical progress against the subcontract deliverables. Subcontractor invoicing will be required based on the physical progress of the work. Major subcontractors will be required to provide monthly status reports that provide verifiable earned value data that can be used for incorporation in the project cost performance reports. The subcontracts technical representative is responsible for monitoring subcontractor progress and performance reporting and verification of subcontractor invoices.
- ODCs are costs not directly related to the performance of specific work deliverables. These costs may include training, computers, software licenses, business travel, relocation expenses, office supplies, and so forth. ODCs are time phased throughout the project-based planned needs. Earned value (BCWP) for ODCs are set equal to the BCWS for each ODC category.

4.6 Variance Analysis

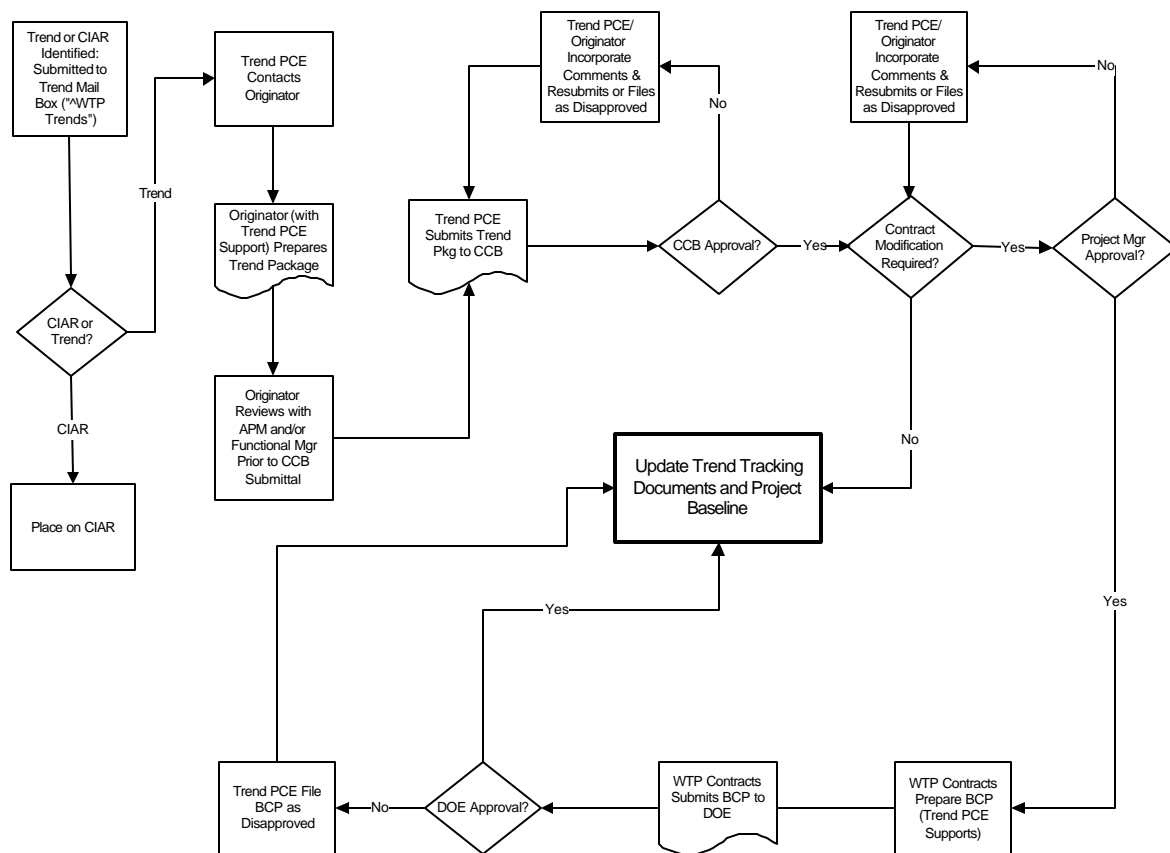
Regardless of whether the BCWP is calculated through the use of EPPR, QURR, or LOE methods described above, the summary of BCWP (when compared to BCWS) will identify schedule variance. The summary of BCWP (when compared to ACWP) will identify cost variance. Because the BCWP, BCWS, and ACWP are all generated and collected at the lowest level of detail practicable, the resulting variances can be monitored and explained, and mitigation efforts put in place at the lowest level.

5 Change Management

5.1 Summary

The change management process employed by BNI encompasses critical items action reporting, trending, contract modifications, and contingency utilization. Figure 6 demonstrates the flow of issues through the change management system. The change management system is a key tool providing early identification of trends or potential changes to work scope. The change control board is the final approval authority for changes within the scope of our contract. Changes identified that fall outside the scope of the contract require approval by the DOE contracting officer prior to proceeding with the work.

Figure 6 Change Management Flow



Changes to the integrated project baseline are identified and documented as described in the trend procedure. The integrated project baseline is made up of technical, schedule, and cost baselines that together define the requirements of the WTP.

The project maintains a current estimate at completion (EAC) by incorporating approved trends and changes into the current authorized baseline. Incorporating changes into the baseline also supports the fiscal year EAC process and aids in identifying potential annual funding issues.

A requirement of the trend program is to hold periodic trend meetings to present trends to the CCB for review of scope, cost and schedule impacts. All trends are reviewed by the CCB for recommendation for approval or disapproval, further action, cancellation, or contract modification.

5.2 Trends

Anyone on the project may initiate a trend. Trends will be identified during the execution of the WTP during all phases of the project (design, construction and commissioning). Most trends will be recognized as variances during performance reporting and measurement of project activities. As trends are identified they will be documented on a trend notice and classified as a specific type. Trends are categorized by type in order to give emphasis to the impact on costs, schedule, scope, and/or performance. The trend notice will classify trends as:

- **Internal scope change** – This type of trend is comprised of variances in cost and scope beyond the Cost account manager's control and may be the result of changes in labor or materials pricing or workscope additions within the general scope of the contract. Internal scope changes are funded from project contingency.
- **Contract change** – This type of trend is a change to the project scope, schedule, cost, contract terms, or funding that is imposed by any agency not within BNI's direct control. Contract changes flow through the trend program and are submitted to DOE in accordance with the prime contract management process. DOE funds contract changes.
- **Other internal change** - This type of trend captures deviations from the baseline not falling into the internal scope change or contract change categories. These changes are labor performance-related and are also funded from project contingency.
- **Baseline update** – This class of change is the result of BNI's annual baseline update. This trend represents the difference between the previously approved project budget baseline and the project's annual baseline update. These changes are funded from project contingency.
- **Schedule trend** - A potential change to the level 3 current integrated schedule is identified as a schedule trend. Schedule trends typically result from the reduction or extension of schedule duration or logical integration revisions.

5.3 Contingency Utilization

A contingency utilization profile will be developed to define the projected cumulative use of contingency for the lifecycle of the project. The contingency utilization profile establishes the projected contingency requirements associated with major lifecycle phases of the project (such as design, construction, and commissioning). BNI has the authority to use contingency within the limits delineated by the contingency utilization profile. There is no trend threshold other than the annual contingency identified in the contingency utilization profile. Notice will be given to DOE, as soon as contingency use is projected, to exceed the limits set by the contingency utilization profile. DOE approval is required to utilize contingency that exceeds limits established in the utilization profile.

5.4 Contract Modifications

Contract changes may be identified through the trend program, and are processed and submitted to DOE in accordance with the prime contract management process within the BNI contracts organization. Trends are directed to the BNI contract organization for processing as soon it is apparent that a contract modification is required. BNI contracts will keep the DOE contracting officer informed of any pending contract changes and will process any required baseline change proposals for submittal to DOE.

DOE has the discretion to direct changes to BNI at any phase in the project. All DOE-directed changes shall be evaluated for potential impact to the current project baseline and existing contract. If the DOE direction is not a change to the contract it will be handled through the trend program. If, however, the DOE directs the addition of new scope, a change proposal requesting a contract modification will be processed.

In accordance with the terms of the contract, DOE is obligated to provide specified funding levels throughout the lifecycle of the project in support of projected needs. If changes are made to the funding limits provided in the contract, a change proposal will be processed.

6 Annual Baseline Update

6.1 Summary

The Project Baseline as established in section 3 is managed throughout the year by proper use of the trend program described in section 5. Annually, all outstanding approved performance trends will be incorporated into the BCWS through the annual baseline update as described below. A baseline update trend will be written at the conclusion of the annual baseline update to incorporate changes into the project baseline. Additionally a review of all remaining workscope will be conducted and changes incorporated into the annual update. This annual update will begin in January of each year, concluding with a WTP baseline deliverable on April 15 as required by Section C, Standard 1 of the contract. The Project Controls Department is responsible for coordinating the annual baseline update. The functional managers are responsible for the quality of the cost, schedule, and scope inputs while the WTP project manager provides final approval. The annual baseline update uses all the methods employed in section 3, and provides for special emphasis in the following areas.

6.2 Quantity Verification

Design drawings will be reviewed annually to verify the quantity of design drawings remaining to be completed. All completed design drawings will be reviewed to validate the estimated construction commodity quantities (such as pipe, hanger, or cable).

6.3 Pricing

- Wage rates will be updated to reflect current year rates and bargaining unit agreements.
- Material dollars will be updated to reflect current industry pricing.
- Subcontractor estimates will be updated to reflect current estimates to complete.
- ODCs will be reviewed to validate to-go costs.
- Current vendor quotes will be used for equipment pricing changes.

6.4 Unit Rate Verification

Unit rates for engineering deliverables (such as drawings and calculations) and construction commodity installations (such as pipe, hangers, and cable) will be validated by reviewing to-date unit rates experienced on this project.

6.5 Level of Effort and Distributable Construction hours

Level of effort (LOF) job hours and field distributable hours will be reviewed for consistency with the current level 3 schedule.

6.6 Schedule

Durations for level 3 schedule activities that are unit-rate sensitive will be adjusted to reflect changes in unit rates identified in Section 6.5 above.

6.7 Escalation and Contingency

Escalation will be updated to reflect the current guidance from the current year DOE field budget call. Contingency will be calculated in each update using BNI's rack 8 contingency analysis tool.

6.8 Reconciliation

Upon completion of the annual baseline update, reconciliation will be performed comparing the current estimate to the prior year's baseline estimate. The reconciliation will group variances into the following categories:

- Wage rates
- Unit rates
- Material pricing
- Subcontract pricing
- Quantity changes
- Escalation
- Contingency

6.9 Funding Level Evaluation

Upon completion of the annual baseline estimate, costs will be loaded into the level 3 schedule and the cost processor (COBRA) to be time phased. The resulting cash flow will be compared with the annual funding limitations provided in the contract. Schedule completion dates may require adjustment to accommodate funding availability.

7 Funds Management

7.1 Summary

The funds management process is designed to ensure that cost and commitments within the fiscal year do not exceed funding limitations provided by the contract. The BNI systems employed to provide this assurance are the cost and commitment (CoCo) database and the COBRA cost processor. The COBRA processor provides forecasting data for loading of CoCo.

7.2 Cost and Commitment

Initially, the project budget is loaded into the CoCo system at the charge code level. This is inclusive of all labor, material, and subcontract costs. Monthly commitments for all purchase orders and subcontracts are received from the BNI procurement system (BPS) and entered into CoCo. Monthly labor costs are entered into CoCo from the controllers reporting system and costs for all procurements are entered from the accounts payable system. Cumulative cost and commitment values in CoCo are then reconciled to the annual budgets in COBRA and the annual funding limits provided in the contract. The integrity of CoCo is a cooperative effort between project controls, the controller's office, and procurement.

The CoCo system has the facility to accommodate the forecasting of both costs and commitments at the purchase order, subcontract, and/or the cost code level to allow for redirecting project funds to the highest priority work within the project's budget and funding limits.

8 Project Reporting

8.1 Summary

Project reporting is the culmination of all project control efforts. Providing timely and accurate project performance and analysis is essential to the successful management of the WTP project. Monthly status reports and quarterly critical analysis reports to DOE will be provided as required in section C, standard 1 of the contract. The baseline deliverable and monthly reports will be provided with electronic files to allow DOE access to performance measurement at the level of detail desired.

Performance reporting is available at the lowest level of detail for use by the cost account manager and can be rolled to higher levels as required by the reviewing audience.

The project will produce performance reports and hold performance reviews as identified below.

8.2 Biweekly

- Level 4 schedule reviews chaired by the area project managers
- EPPR reviews chaired by the cost account managers
- QURR reviews chaired by the construction manager
- Report of labor charges will be provided to cost account managers
- Change control board will meet to review the current trend data and critical item action reporting
- ODCs

8.3 Monthly

- Internal project reviews chaired by the WTP project manager or delegate
- External project reviews as required in the contract
- Monthly status report

8.4 Quarterly

- Critical analysis report

9 References

WTP Project Documents

CE-24590-PCA00001, *Project Baseline*

PL-W375-TE0006, *Project Execution Plan*

RPT-W375-MG00078, Rev.0, *Due Diligence Summary*

Other References

Design and Construction of the Hanford Tank Waste Treatment and Immobilization Plant, Contract No. DE-AC27-01RU14136

River Protection Project-Project Management Plan, DOE-ORP-2000-06, Rev.1P (Draft)

Appendix A

Procedure Development and Modification Schedule

Appendix A

Procedure Development and Modification Schedule

DOCUMENT DESCRIPTION	APR		MAY				JUN					JUL			
	20	27	4	11	18	25	1	8	15	22	29	6	13	20	27
Critical Items Action Report	◆ Complete														
Trend Program															
Earned Value															
Estimating															
Estimate at Completion															
Engineering Job Hour Control															
Offsite Job Hour Control															
Field Non-Manual Job Hour Control															
Field Manual Job Hour Control															
Material and Subcontract Cost Control															
Quantity Tracking															
Cost and Commitment Tracking															
Work and Organizational Breakdown Structure (WBS/OBS)															
Project Controls Plan	◆ Complete														

Appendix B

Work Breakdown Structure

Appendix C

System Integration - Project Performance

Appendix C

System Integration - Project Performance

